

# Newsbulletin

The newsweekly for Laboratory employees and retirees

## Laboratory study shows similarities between starquakes and earthquakes

Stars may shake like the Earth.

That's the conclusion of astrophysicists at the Laboratory, who have found strong similarities between the size, frequency and intervals for earthquakes and for astronomical events on neutron stars apparently powered by enormous starquakes.

In a paper published in the latest edition of *Nature*, the British weekly science journal, Richard Epstein of Astrophysics and Radiation Measurements (NIS-2) and his colleagues chart statistical properties shared by terrestrial quakes and these possibly starquake-caused events.

Their studies for the first time show concrete evidence of similarities between measured stellar events and earthquakes. These events may be powered by starquakes, they say.

"This appears to be the best evidence yet that earthquake-like events are universal to planets and stars," Epstein said.

A neutron star is the incredibly dense corpse of a star that died in a supernova explosion. It has slightly more mass than the Sun, but is only 10 to 20 miles across. A teaspoon of neutron star stuff would weigh roughly a billion tons. When a neutron star cools, it grows a mile-thick crust surrounding a liquid interior, much like a planet.

For years, astronomers have gathered data on events that reveal the explosive nature of neutron stars: Soft Gamma Repeaters, repeated flashes of relatively low-energy gamma rays of around 30,000 electron volts.

Epstein and his co-authors analyzed data on Soft Gamma Repeater events gathered by a Laboratory gamma detector on the International Cometary Explorer.

They compared the Soft Gamma Repeater events with earthquake activity along faults in southern California, Utah and Yellowstone National Park.

The researchers found strong resemblance in the patterns of sizes, frequencies and the intervals — or waiting times between events — of earthquakes and Soft Gamma Repeaters. Larger and smaller events occur at nearly identical rates in both. If two events take place near each other in time, the time to the next event also will be short; similarly, if two events are far apart, the next event or earthquake will be a long time coming. They also found that for both earthquakes and Soft Gamma Repeaters, size and waiting time have no correlation.

The statistical similarities between earthquakes and the neutron star events point to similar origins in the strains and sudden energy releases of earthquakes and starquakes, the researchers said.

The paper's co-authors are Baolian Cheng, a postdoctoral fellow in NIS-2; Robert Guyer of the University of Massachusetts, who is a visiting scholar in the University of California's Institute for Geophysics and Planetary Physics at the Laboratory; and A. Cody Young, a two-year summer student in NIS-2 and recent graduate of the Colorado College. Their research was funded chiefly by the IGPP and the National Aeronautics and Space Administration.

"A neutron star is more like Earth than a gas planet like Jupiter, because both Earth and neutron stars have crusts that appear to behave in similar ways," Epstein said.

In terrestrial and stellar quakes, strain energy builds up in the crust and is released explosively in fault regions.

Because the crusts of neutron stars are incredibly more dense than Earth's crust, far greater energies build up before the crust cracks. In starquakes, entire hemispheres of stars can twist relative to each other before explosively releasing their energy.

These events are large enough to power the Soft Gamma Repeaters, said the Lab scientists. They speculate that an evolving, super-strong magnetic field could provide enough energy to maintain the high levels of strain in the star's crust.

"By making comparisons with Earth, we can learn a lot more about the behavior of the stars," Epstein explained. "The way the radiation is produced in neutron stars may be similar to the way magnetic energy is converted into high-energy particles in Earth's magnetosphere."

The Los Alamos research has implications for the understanding of the most distant stars and the next temblor to hit California, Epstein said.

By studying a relatively young neutron star, scientists can look at seismic evolution over one-thousandth of the star's lifetime. By contrast, only a few hundred years of quake data are available for the 4-billion-year-old Earth.

"We've never seen the largest possible terrestrial earthquakes, but we are seeing these maximum events with neutron stars," Epstein said.

Neutron stars may prove to be seismic laboratories whose timescale has shrunk dramatically, and studying starquakes may help improve models of terrestrial quakes, he said.

"This is the kind of interdisciplinary research for which Los Alamos and the Institute for Geophysics and Planetary Physics are so well-suited," Epstein added. "We consulted extensively with Los Alamos geophysicists to achieve some results that could benefit both astrophysics and geophysics."

—Jim Danneskiold



Illustration by Edwin Vigil

### INSIDE THIS ISSUE

#### Lab's personnel policies check out

A team chartered by the University of California Office of the President to review the Lab's personnel policies found some variations between policies at the Lab and other UC labs and campuses but concluded the variations are minimal and allowed under the management contract.

... Page 2



#### One-stop shopping for training

Through a new online system, employees can register for courses, view course calendars and find out just about everything they need to know about training currently being offered through the Lab.

... Page 4

#### Newsbulletin

Mail Stop C318  
Los Alamos, NM 87545

Nonprofit Organization  
U.S. Postage Paid  
Los Alamos, NM  
Permit No. 107

# University-chartered team reports on Laboratory personnel policies

A team chartered by the University of California Office of the President that reviewed certain Lab personnel policies at the request of Laboratory Director Sig Hecker has concluded that while there are some variations between policies at the Lab and other UC labs and campuses, they are minimal and allowed under the contract.

The team was at the Lab for a week in late April; it solicited comments from employees and retirees on one morning and focused its review on Section 100 of the Lab's Administrative Manual, which deals with requirements and procedures governing employment from hiring to termination.

Dennis Shimek, personnel director at UC, Davis, was chairperson of the team. Others on the committee were Michael Goldstein of Lawrence Berkeley National Laboratory, Jeanne Bargmann of Lawrence Livermore National Laboratory, Carmen Estrada of the UC Office of the President, and Vicki McCabe and Art Garcia of the Human Resources (HR) Division, who provided staff assistance to the team.

"We are very grateful that UC has reviewed our personnel policies," HR director Mike Lucero said. "The Lab's personnel policies are management actions taken to address local needs. We feel these Lab policies are consistent with UC's policies."

The team also reviewed Appendix A of the Lab's contract with UC. Appendix A, McCabe said, establishes allowable costs associated with personnel policies and leaves.

The team's written report concluded that the Lab's personnel policies were considered approved modifications to UC policies, noting that the UC president can approve such modifications of personnel policies for the three UC-managed labs.

The report noted that 15 current and former employees spoke to the committee during its open

forum. They spoke about, among other things, Lab policies and practices regarding grievance rights, binding arbitration, reduction-in-force, seniority, "streamline selection process," Lab employee relations, notices to employees of Lab policy revisions, management accountability, benefits retirement issues and UC's oversight role of Lab personnel policies.

"Many [Lab] personnel policies reflect the uniqueness of the facility, its primary mission and distant geographical location," the report said.

The report authors noted that Lab employees hired before the current UC contract was approved enjoy a more generous sick leave and vacation accrual than those hired later. It also noted that employees who lose their jobs through a reduction in force receive more generous severance payments than similarly affected employees at Lawrence Berkeley and Lawrence Livermore national laboratories.

The report, which was compiled before recent discussions with the Department of Energy on preferential hiring of former employees, also noted that the Lab doesn't have preferential transfer or rehire or recall rights as do employees at the other UC labs and campuses. The report noted that while not the result of any UC policy, recently laid off employees at the Lab receive Section 3161 benefits not available to employees at UC campuses.

Section 3161 of the Defense Authorization Act sets guidelines for mitigating the effects of down-sizings at Department of Energy facilities on individuals and communities. Included in these benefits are preferential hiring, outplacement, relocation and tuition assistance.

The report found differences in the areas of layoff and complaint resolution. It noted, for

example, that Lab employees receive 60 days notice that their jobs will be eliminated; 30 days notice is given at the other UC Labs and campuses.

Regarding complaint procedures, the committee wrote that at the Lab, contents of a performance appraisal aren't reviewable under the Lab's complaint process and poor performance isn't the basis for corrective action under the Lab's disciplinary policy, but rather is handled through development of a performance development plan.

At the other UC labs, for certain employees, poor performance is a basis for corrective action via progressive discipline.

—Steve Sandoval

## Obituary

### Gordon L. Jacks

Gordon L. Jacks, 74, a long-time member of the weapon testing community and a former resident of Los Alamos, died at his home in Las Vegas, Nev., on Aug. 2.

He was born in Douglas, Ariz., the youngest of four children. He graduated with a bachelor's degree in chemistry from the Virginia Military Institute in 1943 and joined the Army as a commissioned officer. He served as a field artillery lieutenant in France and Germany during World War II. He met his future wife, Jean, an Army nurse officer, while on active duty.

In the immediate postwar years, Gordon participated in Operation Sandetone at Eniwetok Atoll.

He earned a master's degree in physics in 1951 from Ohio State University, where he had been detailed in 1948 for advanced training.

He went to work at the Laboratory in 1955 as a military staff member. He commanded Task Unit 7, the radiation safety organization for Task Group 7.1, during operations Redwing and Hardtack. He was alternate rad-safety officer to the test director for Operation Plumbbob in 1957. During the Eisenhower testing moratorium, he was assigned to the Defense Atomic Support Agency in Albuquerque. He became radiological safety officer for Joint Task Force 8 during Operation Dominic, the last United States atmospheric test series, in 1962. After a tour as commanding officer of the U.S. Army Nuclear Defense Laboratory, he retired from active duty in January 1966, as a lieutenant colonel.

He joined the Lab's J Division in March 1966 as part of the Nevada Test Site permanent party. He was a senior member of the Los Alamos testing organization until his retirement in February 1984, when he was the Laboratory's alternate test director. He remained active in Department of Energy programs until December 1995, serving on various safety committees and litigation teams.

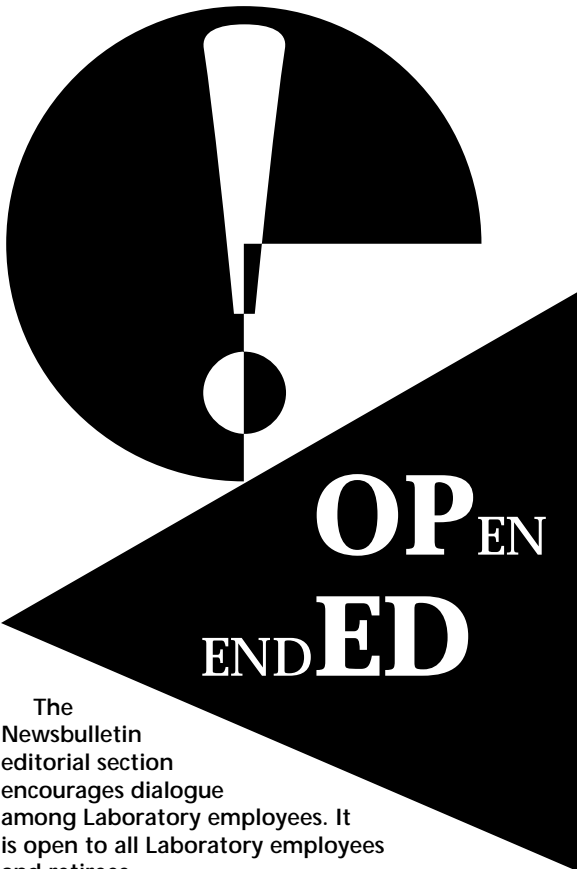
He participated in community service activities throughout his retirement years, particularly in the veterans hospital auxiliary.

He will be buried Wednesday next to his wife in Arlington National Cemetery in Virginia Wednesday. Jacks and his wife are survived by their daughter and two of their three sons.



### Native American students share experiences at the Lab

Stephanie White, right, David Honaberger, center, and Paul Torres of Ecology (ESH-20) were among the 14 Native American students who gave presentations July 26 at the J. Robert Oppenheimer Study Center describing their summer experiences at the Lab. A similar presentation took place at the Santa Clara Pueblo Aug. 2. Five years ago, about 10 Native American students were involved in a Lab summer program; this summer, 45 students representing 18 tribes from more than five states came to the Lab under several programs, such as Underrepresented Minority and Female, Science and Technology Alliance and Two-year College Initiative. Most of them will return to their high schools and universities by mid-August. Photo courtesy of Mike Kolb, Community Involvement and Outreach (CIO) Office



The Newsbulletin editorial section encourages dialogue among Laboratory employees. It is open to all Laboratory employees and retirees.

The section includes letters to the editor, guest editorials, questions and answers, the Inside Story, and corrections and clarifications.

Letters to the editor and guest editorials must address Laboratory policies and practices and be relevant to a broad segment of employees and retirees. Relevancy will be determined by the editor, and all material will be edited for clarity, timeliness, length and Newsbulletin style.

Send letters or questions to Newsbulletin editor, Mail Stop C318. Or send letters and questions to *newsbulletin@lanl.gov* by electronic mail. Letters must be signed and include the author’s middle initial, group affiliation and telephone number. Letters should be no longer than two pages of double-spaced text. Authors’ names will be published.

Questions must be submitted with the writer’s name and telephone number. The Newsbulletin will seek a response to all questions. However, all responses will not appear necessarily in the paper. Those questions and responses that are published will include both the questioner’s and the responder’s name.

The Newsbulletin reserves the right not to publish submissions.

Employees or retirees who want to suggest an idea for a guest editorial should call the Newsbulletin at 5-7779.

If you have questions about the Newsbulletin’s editorial policy, call 7-6103.

Check out the new UPDATE page at <http://www.lanl.gov/projects/PA/UPDATE/update.html> on the World Wide Web.

**Read UPDATE, your daily source for the latest news and information around the Lab.**

The Newsbulletin is published Fridays by Public Information (PA-1). The staff can be reached at Mail Stop C318, fax 5-5552, *newsbulletin@lanl.gov* by electronic mail or stop by the office at TA-3, SM-100. The Newsbulletin office telephone number is 7-6103. Individual telephone numbers are listed below:

**Editor:**  
Jacqueline Paris-Chitanvis, 5-7779

**Production coordinator:**  
Denise Bjarke, 7-6103

**Illustrator:**  
Edwin Vigil, 5-9205

Los Alamos National Laboratory is an Affirmative Action/Equal Opportunity employer. It is operated by the University of California for the U.S. Department of Energy.

*Printed on recycled paper*

# July and August employee service anniversaries listed

<b>July</b>		
<b>40 years</b> F.W. Brinkley Jr., XTM Concha Collier, CST-9	Daniel Rusthoi, AOT-1 Stephen Schmidt, STB LDRD Tommy Stup, CIC-11 Robert Trujillo, FSS-6 Robert Valdez, NMT-5 Jean Vigil, BUS-7 Rodney Whitaker, EES-5 Richard Wilhelm, ESA TSE	<b>10 years</b> Janice Aasen, NMT-5 Diane Baker, EES-3 North Carey, ESA EA Edward Derr, CST-7 Jim Devenport, NIS-1 David Harradine, CST-6 Jose Hernandez, NMT-9 Spencer Hill, BUS Stephen Jachim, NIS-4 Edward Jacobson, AOT-2 Aleene Jenkins, ESH BSO Ben Laake, ESA WE Susan Martinez, BUS-3 Kevin Ott, CST-18 Jerome Paul, DX-7 Robert Reid, ESA EPE Evan Rose, DX-6 Drusilla Roybal, BUS-4 Brian Rusnak, AOT-1 Patrick Schafstall, NIS-4 Robert Shea, XNH Kenneth Smith, XTM Stuart Trugman, T-11 Esther Vigil, T-7 Bethany Wannigman, CIC-13 Michael West, MST-5 John Wills, T-1
<b>35 years</b> Troy Eddleman, XNH	<b>15 years</b> Kenneth Ault, ESH-1 Karen Burkett, HR-5 STAFF Joseph Bustos, FSS-9 Julio Castro, ESH-1 Steven Cole, ESA TSE Zora Dash, EES-4 Harald Dogliani, NIS IT Robert Drake, TSA-4 Jose Duran, CIC-10 Camilo Espinoza, P-25 Stacey Fradkin, HR-5 STAFF Lydia Gallegos, P Debra Graves, BUS-4 Norman Gray, P-23 Aaron Honey, DX-2 Paul Jackson, LS-7 Charles Kise Jr., MST-4 Kin Leung Lam, TSA-10 Richard Lesar, MST CMS Loretta Martinez, HR-5 STAFF Martha Martinez, NIS-6 Yolanda Martinez, AOT-9 Dorothy Merrigan, CIC-5 George Nickel, P-22 Jimmie Parson, LS-5 Richard Pearson, FSS-21 Sivasankara Pillay, NMT Relf Price III, NMT-4 John Rayburn, NMT-4 Ronny Snow, MST-7 Warren Sparks, XNH Jane Zongker, DOD	<b>5 years</b> Paul Apen, ET William Atkins, NIS-3 Rhonda Dixon, EES John Eilert, ESH-2 Glenda Gomez, NMT-5 Sharon Jennings, HR-6 T&D Toni Mork, FSS-6 Paul Nelson, ESH-10 Hugo Ojeda, FSS-7 David Sigeti, XCM
<b>30 years</b> Paul Allison, AOT-2 Dennis Gill, STB SE Nancy Koski, CST-3	<b>25 years</b> Jeffrey Bradley, P-22 Charles Derouin, MST-11 Jo Anne Espinosa, CIC-9 George Guerin, AOT-2 Siegfried Hecker, DIR Thomas McLaughlin, ESH-6 Richard Mischke, P-25 Gerald Pomeroy, FSS-10 Pedro Romero, CIC-4	
<b>25 years</b> Daniel Archuleta, CIC-7 Stephen Caldwell, P-24 Randolph Carlson, DX-6 Raymond Depaula, MST-7 Matthew Hykel, NIS-5 James Jackson, DIR John Jennings, NIS-33/35 Cheryl Lucero, DX-1 Lionel Madrid, FSS James Munroe, NIS-8 Michael Osborn, DX-5 Sylvia Pana, CIC-15 Kathleen Parker, CIC-1 Gary Pfeufer, XHM James Ray, EM ER Jake Rodriguez, ESA WMM	<b>20 years</b> Sandra Roybal, CIC-17 Robert Springer, MST-7 Ray Trimmer, ESA WMM Ellen Wagner, NIS-6 Robert Watt, P-24 Suzanne Watters, TSA Martha Zumbro, AOT-6	<b>10 years</b> Floyde Smith, ESH-1 Joe Tubb, ESA DE Gerald Vasilik, DX-4
<b>35 years</b> John Shaner, NIS CISA James Shipley Jr., EM DO J.F. VanHecke Jr., HR-3 HRIS	<b>15 years</b> Juliana Allen, BUS-5 Paul Arendt, MST-7 Paul Argo, NIS-1 Cris Barnes, P-24 Roy Bates, ESA WMM Frank Bobrowicz, CIC-2 W. Robert Boland, CIC-8 Harry Dewey, CST-1 Claudette Duncan, LER FE Ronald Flury, ESA EA Cherryl Gunter, ESA EPE Richard Hale, ESA WMM John Halsey II, DX-4 Irma Holtkamp, CIC-14 Renee Idar, HR-5 STAFF James Irwin, CST-26 Stephen Knox, NIS-1 Ron Lujan, DX-5 Ronald Lujan, FSS-10 Wayne Lunsford, ESA WE Eloise Margiotta, CST-18 Bonnie Martinez, HR-5 STAFF Richard McLellan, NMT-8 Christine Montoya, P Benny Moya, CIC-10 Larry Parker, FSS-14 Thomas Phillips, ESA MT Robert Potter, ESA DE Arnold Sandoval, NMT-2 Donna Schneider, BUS-8	<b>10 years</b> Robin Bachman, ESH P&MPO Joseph Baiardo, NMT-5 H. Thomas Blair, NMT-9 Timothy Burns, NMSM ST Dawn Flicker, XNH Rachel Fresquez, AOT-1 K. Garduno-Paul, ESH-17 Edward Joyce Jr., ET Janette Lujan, DX-4 Marcos Martinez, ESH-1 Vivian Pearson, HR-5 STAFF John Plato, AOT-9 Leroy Rodriguez, DX-7 Robert Ryan, NIS-7 Stephen Schreiber, NMT-2 Stevie Spalding, DDT Paula Stretz, TSA-5 Antoinette Taylor, MST-11 Charles Thorn, ESH OIO Octavio Vela, ESA MT Edward Whitted, TSA-5 Charles Wilder Jr., CIC-5
<b>30 years</b> J. Rose Archuleta, CIC-10 Robert Brown, AOT-7 Gary Carr, AOT-6 Robert Damjanovich, NIS-6 Manuel Echave, NIS-4 Will Fox, ESA TSE James Friar, T-5 Marilee Fuehrer, CST-5 Frank Gac, MST-4 James Goforth, DX-3 Sin-Tao Hsue, NIS-5 James Hyman, T-7 S.F. Klosterbuer, NIS-5 Stanley Kosiewicz, CST-7 Gary Lewis, MST-6 Larry Luck, TSA-11 Robert Massey, NIS-1 Ronald Moses Jr., T-3		<b>5 years</b> Thomas Allen, NMT-5 Alexander Balatsky, T-11 Peter Barnes, P Marilyn Bentley, BUS-2 David Bowman, DX-5 William Heimbach Jr., PA-1 James Koster, NIS-6 Anna Modesitt, FSS A. Rene Pozzi, IP Frederic Thompson, FSS Louise Walker, ESA TSE



# All Laboratory training linked through new page on the Internet

Laboratory employees and subcontract personnel interested in taking classes now can find a consolidated listing of course offerings online.

The Human Resources (HR) Division's Training and Development Group has worked with other Lab organizations to set up the online course offerings, said Anne Khoury, the Lab's training director in HR.

"We're trying to create one place where our training customers can go to for classes," said Khoury. "We want to make it easy on the customer so they can see what training is offered at the Lab ... Everyone had their own home pages for training. That didn't solve the issue of the customer knowing where to go."

Through the new online system, employees or subcontractors can register for courses, view course calendars that include information about when the courses meet and where they're held, read about course offerings and print out information. Employees still are accountable to their supervisors when they sign up for courses. Recharge courses will be billed to employees' cost codes.

The online training page has links set up to access courses offered by Customer Services (CIC-6), ES&H Training (ESH-13), HR-Training and Development, the Facilities, Safeguards and Securities (FSS) Division, the Research Library (CIC-14) and the Department of Energy, said Khoury.

The online training page can be found at <http://www.hr.lanl.gov/html/lanltraining> and can be



Illustration by Edwin Vigil

accessed by going to the Lab home page and clicking on "Information by Subject" or "Services."

"By providing a 'training' home page, workers have a single resource that links to all training at the Lab," said Yvonne Ellington of ESH-13. "This saves workers time and increases visibility of our online services."

"[This home page] makes it easier for the customer to find the kind of training they need. It's a real good shortcut," said Vicki Brown, team leader of the CIC-6 training development and coordination team.

Training schedules had been published in the Newsbulletin but were discontinued in December.

Research Library courses focus on research resources through the World Wide Web, the University of California's MELVYL Library System, other databases and a Research Library overview.

Khoury said eventually the online training page will include course offerings from University of New Mexico, Los Alamos' Graduate Studies Program and training at other University of California campuses and labs.

"We really want to set this up so we can go external," said Khoury. "We can cross-use training materials so we don't have to reinvent the wheel. Not only is this useful for the customer but also for the training professional."

"If a course we need to create already has been developed at another DOE site, then we can piggyback on what another trainer has developed," Tish Rzeszutko of HR-Training and Development added.

For more information about the online training page, call Khoury at 7-5247, 5-8649 or write to [khourya@lanl.gov](mailto:khourya@lanl.gov) by electronic mail.

—Steve Sandoval

## BUS increases efficiency with desktop standards

Preliminary statistics indicate that the desktop standards the Business Operations (BUS) Division began implementing last year are having the intended effect of increasing efficiency and productivity in the division, while reducing the cost of doing business.

A desktop standard means every microcomputer in an organization is operating with the same software and hardware. Camilo Perez of Systems Support (BUS-7) championed the effort to implement desktop standards and has been compiling data reflecting initial results of the ongoing effort.

Some of his findings include the following:

- By using only one electronic mail system, Eudora, division employees now may send messages and attach documents to each other without the fear of the messages or documents ending up "unreadable" upon reaching their destination. Support costs also have been reduced by more than 50 percent.

For example, the cost per account with the All-in-one electronic mail system (the one BUS eliminated in favor of Eudora) was \$62, and the cost of maintaining the computer for this system was about \$275,000 annually. With Eudora, the Post Office Protocol server now resides within the Computing, Information and Communication (CIC) Division at no direct cost to BUS. And the cost per POP account is only \$21 per person.

- Desktop standards have allowed BUS to reduce its number of file servers from 12 to two, thereby reducing maintenance and operations costs and other related obligations, such as license administration. It also has made it easier for the division to distribute standard applications and implement divisionwide virus protection. And because of the reduction in file servers, the division expects a 36 percent reduction this year in loss of productivity due to server downtime.

- Desktop standards have allowed most BUS employees to more effectively share applications. More than 90 percent of BUS employees currently use the standards for their operations. The division has about 500 employees.

Perez noted that it is not possible for everyone in BUS to be using the desktop standards because in some cases, BUS employees are out in the field with their customers and need to use the same kind of software and hardware their customers are using in order to perform their work.

He added, however, "If those same employees end up coming back to any of our core sites, they would then transition to the desktop standards."

The level of divisionwide commitment to this effort has been just tremendous, said Perez, adding that BUS management commitment played a significant role. Perez also credited customer involvement and technical support for the early success the division has enjoyed so far regarding the endeavor.

Concerning the training requirements involved with implementing the standards, Perez said the BUS managers were trained first because of their commitment to the effort. "We also felt that if the managers were trained first, the other employees would follow through leadership by example. That strategy worked great. It's one of the best moves we could have made," he said.

With desktop standards comes the prospect of regularly evaluating the software and hardware for efficiency. The Desktop Standards Team comprised of representatives from every group in the division and the Information Architecture Project now meet once every three months to discuss this and make recommendations, said Perez.

The division also puts out a newsletter letting employees know when a change in software or hardware standards is going to take place.

Monica Spontarelli, BUS-7 Help Desk coordinator, said BUS also has seen a direct correlation between the adoption of standards and the increase in the number of problems resolved by BUS technical support staff at the first level.

*continued on Page 7*

# News makers

## Albert receives 1996 Governor's Award



**Diane Albert**

**Diane Albert** of Materials Technology: Metallurgy (MST-6) recently received the 1996 Governor's Award for Outstanding New Mexico Women. The award recognizes those women who help other women on both a professional and community level.

Albert was one of 31 women from throughout the state who received the award from Lt. Gov. Walter

Bradley during a July 20 ceremony at the Albuquerque Hilton. Eighty women were nominated.

Albert, who has been at the Lab a little more than three-and-a-half years (most of that time as a post-doctoral researcher), has been involved in several programs for the Lab and elsewhere. Last year, she mentored students for the Summer Experience for the Economically Disadvantaged Program run by the Science Education and Outreach (HR-SEO) Office. This year, Albert is mentoring a female high school student in MST-6 under a co-op program.

She also has tutored elementary and high school students at Santa Clara Pueblo. In addition, she is a member of New Mexico Women in Science, an organization that annually holds the "Expanding Your Horizons" Conference at the Lab. Albert conducts workshops involving the use of a scanning electron microscope during this event.

Albert also is secretary for the Women's Diversity Working Group and a member of the Lab's Pedestrian and Bicycle Subcommittee.

Away from the Lab, Albert currently is president of the League of Women Voters of Los Alamos County. She served as LWV secretary and vice president before recently becoming president.

Albert also serves on the advisory board of a mentoring program at the University of New Mexico, Los Alamos, called New Beginnings. The program offers financial aid, counseling and mentoring for displaced homemakers and single parents who are considering going to college, many of them for the first time.

Albert said that while she has mentored primarily women thus far, she wants to mentor more men in the future. Her main focus is with Northern New Mexico students.

## Sandoval wins award at Spanish Market



**Donald Sandoval**

Remember **Donald Sandoval** of the Applied Theoretical and Computational Physics (X) Division? Sandoval is the weaver and wood carver who was featured in the Final Word section of the May 10 Newsbulletin.

At last year's Spanish Market, he won an award for "Excellence in Rio

*continued on Page 7*

# Lab summer student program focuses on stockpile stewardship

The first-ever Lab Stockpile Stewardship Summer Student Program is winding down. The summer program, funded by Science and Technology Base (STB) Programs, started near the end of May and ends Aug. 16.

The idea of instituting a summer student program that focuses specifically on various aspects of stockpile stewardship came from Elane Flower-Maudlin, then with STB, in December last year. Stockpile stewardship is one of the Lab's core functions.

Lab Fellow John Petrovic of Ceramic Science and Technology (MST-4) is project leader for the program. Ken McClellan and Richard Hoover, also of MST-4, are assisting Petrovic.

"Elane gave us guidance on which students should be involved in this kind of program and what areas of stockpile stewardship we should cover," Petrovic said.

Participating students either must reside in the southwest or be enrolled in a university from that region, and the information covered in the program must be unclassified, noted Petrovic. He came up with a program outline in February that was approved by STB Program Director Dennis Gill. The Stockpile Stewardship Program now is run under the guidance of Abad Sandoval of STB.

This year's focus is on erbium oxide, a stable, ceramic material that plays an important role in stockpile stewardship. Petrovic said covering this topic was very appropriate in light of the limited amount of literature he could find regarding the material. All work is being done in labs inside the Materials Science Laboratory Building.

The participating students are learning things about erbium oxide that are not well-known, such as its mechanical properties and their relation to its crystalline structure and how to fabricate the material, said Petrovic.

Three students are involved in the program. Petrovic said for the students to receive a meaningful, significant experience and more one-on-one attention, it is best that enrollment in the program be held relatively low.

Russell Romero, a recent Los Alamos High School graduate, has spent the past year as a high school co-op student in MST-4. He also has been helping the other two students become more familiar with the laboratory they're working in. Romero plans to attend Texas A&M this fall and study mechanical engineering.

Marlene Platero, a Taos Pueblo resident who currently is a junior at the Massachusetts Institute of Technology, is getting hands-on experience in materials science for the first time. She plans to come back to the Lab for the next two summers.

Angelique Neuman is a graduate research assistant currently completing her master's degree in materials science at New Mexico Tech. Neuman, a Curacao native, came to the Lab in 1982 and became a naturalized citizen in 1987.

McClellan meets with the students every Monday through Thursday morning to make sure everyone is aware of what's going to take place for the day and that no problems exist. On Friday morning, the students and all three project coordinators conduct a week-in-review session.

During the program, the students prepare a progress report for Sandoval on their research and findings. They later produce a final report. In addition, the students gave presentations on their work to members of STB's University Outreach Program on Aug. 6.

The students also are significantly increasing the fundamental erbium oxide database that McClellan said later could be used by other Lab employees involved in stockpile stewardship.

Petrovic said the students' work may have applications in such areas as placing erbia coatings on metals and stockpile stewardship safety issues. It also may have nonweapon applications, such as corrosion resistance for molten metals, glass and other materials, he added.

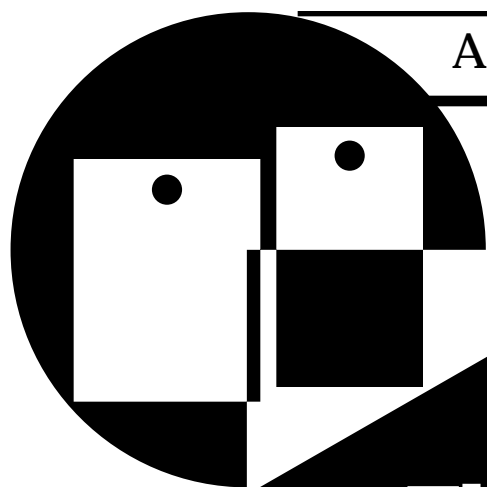
All three students expressed great satisfaction with the program. "It's everything I could have hoped for and more," Neuman said, adding she has enjoyed her experience with the program so much that she recently asked for and received a one-year extension to perform more work on erbium oxide.

—Ternel Martinez



**Russell Romero, right, helps Marlene Platero, center, use a caliper to determine the dimensions of an erbium oxide pellet, as Angelique Neuman prepares to write down the information. All three are students in the first-ever Lab Stockpile Stewardship Summer Student Program. At inset: the erbium oxide pellet is pink in color and looks like an antacid tablet. This particular pellet is 91 percent dense. The students are working to increase the density to 95 percent or greater.** Photo by Fred Rick

## A gallery of miscellaneous information for employees



# The Bulletin Board

Notices must be received by noon Monday, Aug. 12, for publication in the Aug. 16 Newsbulletin. Send notices to Mail Stop C318, via fax to 5-5552 or to [newsbulletin@lanl.gov](mailto:newsbulletin@lanl.gov) via electronic mail. If you miss the deadline, we can put your message on UPDATE. Call UPDATE at 5-7778 before noon Monday through Friday. For Newsbulletin information, call 7-6103.

... a reminder from Engineering Sciences and Applications (ESA) Division



"Anyone's Accident is Everyone's Accident."

## Prudential representative at the Lab Thursday

A representative from the Prudential Insurance Co. of America will be at the Laboratory's Benefits Office from 1 to 3 p.m. Thursday to answer questions about the Los Alamos Total Care Plan. The Benefits Office is located on the second floor of the Otowi Building. Employees must call 7-1806 to schedule an appointment to speak with the Prudential representative.



## Ride sharing

- **Full-time driver and riders needed** for SECA van pool from Santa Fe (DeVargas Mall) to TA-3 and TA-53. Hours: 7:30 a.m. to 4:30 p.m. Call Guy Lussiez at 7-7505

or Seth Hinshaw at 7-5244.

- **Riders needed** for nonsmoking van pool from Santa Fe (Villa Linda and DeVargas malls) to TA-3, Pueblo Complex and Pajarito Complex. Hours: 7:30 a.m. to 4:15 p.m. Call Doug Volkman at 7-0642.

- **Riders needed** for nonsmoking van pools from Albuquerque, Rio Rancho and Bernalillo. Hours: 7:30 a.m. to 4 p.m. (10-hour work day van pool available now). Call David Griego at 877-2360 or 5-8152.

- **Riders needed** for nonsmoking van pool from Albuquerque (westside), Rio Rancho and Bernalillo to Los Alamos. Additional vans available from Albuquerque to Los Alamos. Hours: 7 a.m. to 4 p.m. Call Richard Mirabal in Los Alamos at 5-1449 or 988-0805 (pager), or in Albuquerque at 899-3949 or 848-6942 (pager).

- **Driver/rider needed** for car pool from Santa Fe (DeVargas Mall) to TA-3. Hours: 8 a.m. to 4:45 p.m. Call Gary at 5-1930 or Truel at 7-3007.

- **Driver/riders needed** for nonsmoking van pool from Cuyamungue, Pojoaque, Jacona, El Rancho and San Ildefonso areas to Los Alamos. Hours: 8 a.m. to 5 p.m. Call Frieda at 7-9768.

- **Riders needed** for nonsmoking van pool from La Puebla, Arroyo Seco and Española (Union Hall) to TA-3 and sites along Pajarito Road to TA-35. Hours: 7:30 a.m. to 4:30 p.m. Call Tony at 104-2141 (pager) or Pearl at 5-2937.

- **Riders needed** for nonsmoking van pool from Santa Fe to town site and various sites including TA-3. Hours: 7 a.m. to 4 p.m. (leave Villa Linda Mall at 6 a.m. and DeVargas Mall at 6:15 a.m.) Call Mike at 104-1000 (pager) or Lorraine at 7-6081.

# Job openings

The University of California is an Affirmative Action/Equal Opportunity Employer. Women, minorities, individuals with disabilities and veterans are encouraged to apply.

The Laboratory's online vacancy system has posted the following additional job openings since the last Newsbulletin. You may access the full job text content, as well as general application procedures, from the Human Resources (HR) Division home page at <http://www.hr.lanl.gov> on the World Wide Web. Please note that jobs listed online are open for a minimum of six working days. Consequently, some of the jobs posted in the following list may be closed by the time they appear in the Newsbulletin.

Public workstations are available in the HR lobby reception area in the Otowi Building for those who may be unfamiliar with computer networking. Applicants, including those with Teletype Devices for the Deaf (TDD), should direct further questions to the HR Staffing Group at (505) 667-8622, or to the phone number given with each job listing below.

## OS organizational support

(961741) INTERNAL ONLY, SECRETARY 4, OS 04, MST-6, (\$18,768 - \$31,080/yr.), Clearance: Q (Position will be cleared to this level), Number of Openings: 1, (Regular Full-Time), call 7-9555.

## SSM specialist staff member

(961778) INTERNAL ONLY, QUAL ASSURE SPEC 2, SSM 01, ESH-14, (\$32,232 - \$54,096/yr.), Clearance: Q (Position will be cleared to this level), Number of Openings: 1, (Regular Full-Time), call 7-7940.

## TSM technical staff member

(961777) INTERNAL ONLY, STAFF MEMBER, TSM, NIS-6, Clearance: Q (Position will be cleared to this level), Number of Openings: 1, (Regular Full-Time), call 7-8960.

(961743) INTERNAL/EXTERNAL, STAFF MEMBER, TSM, NMSM, Clearance: Q (Position will be cleared to this level), Number of Openings: 1, (Regular Full-Time), call 7-4392.

(961707) INTERNAL/EXTERNAL, STAFF MEMBER, TSM, NMT-FSQ&IM, Clearance: Q (Position will be cleared to this level), Number of Openings: 1, (Regular Full-Time), call 7-9403.

(961781) INTERNAL/EXTERNAL, STAFF MEMBER, TSM, TSA-10, Clearance: L (Position will be cleared to this level), Number of Openings: 1, (Regular Full-Time), call 7-4182.

(961782) INTERNAL ONLY, STAFF MEMBER, TSM, TSA-10, Clearance: Q (Position will be cleared to this level), Number of Openings: 2, (Regular Full-Time), call 7-4182.

## MGT management

(961742) INTERNAL ONLY, PROGRAM MANAGER, TSM MGT, NMSM-SMF, Clearance: Q (Position will be cleared to this level), Number of Openings: 1, (Regular Full-Time), call 7-4392.

# Along with 'monsoon' season comes lightning

Outside of Florida, Northern New Mexico's mountains receive the most recorded lightning strikes in the country. And since mid-summer is typically New Mexico's "monsoon" season, people should be particularly aware of the possibility they could be struck by lightning.

A look at the most recent statistics on the number of lightning strikes recorded by the Lab's lightning detector at Technical Area 6 attests to the increased likelihood of lightning strikes during the summer, according to Jeff Baars of Air Quality (ESH-17).

In May 1995, 5,745 lightning strokes were recorded. The figure jumped to 20,447 in June then dropped to 5,534 in July. But in August 1995, 44,337 lightning strokes were recorded, Baars said. It dipped to about 6,400 in September then dropped dramatically to 131 in October and 25 last November.

The lightning detector responds to cloud-to-cloud or cloud-to-ground strokes within a 30-mile radius depending on atmospheric conditions, Baars said. A lightning flash may contain between one and 30 strokes with an average of four strokes per flash, he said.

According to the National Weather Service, between 1959 and 1993, New Mexico led the nation in the number of lightning deaths per capita with 65.8 deaths per 1 million people. Wyoming, Arkansas, Florida and Georgia followed New Mexico in order. And the NWS said between 100 and 200 people are killed every year from lightning. The national average is 20.1 deaths per 1 million people.

In June 1990, three Lab employees were struck by lightning after they sought shelter under trees during a heavy rainstorm. According to the National Fire Protection Association, the employees should have avoided trees since they act as good conductors of lightning.

When the threat of thunderstorms develop, the following precautions should be taken, according to Charlie Liles of the National Weather Service in Albuquerque:

- Avoid projecting above the surrounding terrain as you would if standing in an open field or on a mountain top.
- Stay away from open water.
- Stay off motorcycles and bicycles, tractors and other metal farm or construction equipment.
- Put down golf clubs and take shelter. Metal golf shoes increase the probability of being struck.
- Don't stand under natural lightning rods such as tall, isolated trees.
- Avoid taking shelter in small structures that are isolated in an open area.
- If in a forest, seek shelter in a low area under a thick growth of small trees; if in an open area seek a low place, such as a ravine or valley but stay alert for possible flash flooding.
- If you feel your hair stand on end, lightning may be about to strike. If no shelter is available drop to your knees and bend forward putting your hands on your knees. This minimizes your chances of being struck or being used as a conductor of nearby lightning strikes.

Liles said individuals also should consider learning how to administer cardiopulmonary resuscitation, because people struck by lightning sometimes can be resuscitated.

And if inside a building, avoid electrical equipment of any kind, including telephones. Sinks, bathtubs and showers also can act as electrical pathways if the building is hit.

"It's hard to predict where lightning is going to strike," said Phil Romero of Industrial Hygiene and Safety (ESH-5). "People just need to exercise their judgment and understand that the probability of being struck by lightning during a thunderstorm is relatively high. People shouldn't take chances. They should seek shelter until the storm passes."

Romero said employees and subcontract personnel who work outdoors should be especially alert to the possibility of being struck by lightning. Heavy equipment vehicles and cranes serve as grounding paths for lightning because of their metal construction and girth, he said.

"It's more of an awareness thing," Romero continued. "Employees need to be aware that if they see lightning, even in a remote location, they should take precaution and not expose themselves unduly."

Romero said Department of Energy regulations require that Lab buildings have lightning protection systems, which are designed to safely dissipate lightning strikes through a grounding path within the facility.

—Steve Sandoval



## A week of events in and around the Lab

# Calendar

Notices must be received by noon Monday, Aug. 12, for publication in the Aug. 16 Newsbulletin. Send notices to Mail Stop C318, via fax to 5-5552 or to [newsbulletin@lanl.gov](mailto:newsbulletin@lanl.gov) via electronic mail. If you miss the deadline, we can put your message on UPDATE. Call UPDATE at 5-7778 before noon Monday through Friday. For Newsbulletin information, call 7-6103.

### Tuesday, Aug. 13

- **Chemical Physics Lunch Seminar:** "Coulomb Driven Chain Ordering Phase Transitions in Quasi-one-dimensional Electronic Materials," Geoffrey Strouse, CST-1, 12:05 p.m., Otowi Cafeteria Side Dining Room C.
- **Center for Nonlinear Studies (CNLS) Colloquium:** "How Accurate is the Taylor Estimate? Some Results on Model Problems of Polycrystal Plasticity," Robert Kohn, Courant Institute of Mathematical Sciences, 3:30 p.m., TA-3, SM-1690, CNLS conference rooms 102 and 104.

### Wednesday, Aug. 14

- **Center for Nonlinear Studies (CNLS) Workshop:** Aug. 14 through 16, "Adaptive Monte Carlo Methods," TA-3, SM-1690, CNLS conference rooms 102 and 104. For more information and registration, contact Barbara Rhodes at 7-1444 or [office@cnls.lanl.gov](mailto:office@cnls.lanl.gov) by electronic mail.
- **African American Student Association** (a Laboratory-sanctioned organization) **Meeting:** noon every Wednesday. The meeting is open to all high school, undergraduate and graduate students who are employed by the Laboratory. Any interested employees may attend or give presentations. For more information and/or meeting locations, contact James Coley at 5-2040.
- **Subatomic Physics (P-25) Seminar:** "Neutrinos: Oscillations, Gravitational Phases and CP Violation," Dharam Ahluwalia, P-25, 1:30 p.m., TA-53, Building 1, Room A-234.
- **Los Alamos Aeromodelers** (a Laboratory-sanctioned organization) **Meeting:** 7 p.m., Old Fire Barn (upstairs), 4017 Arkansas, Los Alamos. The club is open to those interested in any type of model aviation, including radio control, control line or free flight. For more information, call Gil Merriman at 662-5958.

### Thursday, Aug. 15

- **Los Alamos Bisexual, Gay, and Lesbian Alliance** (a Laboratory-sanctioned organization) **Meeting:** noon, Mesa Public Library. For more information, call 661-5238.
- **Overeaters Anonymous** (a Laboratory-sanctioned organization) **Meeting:** 12:10 p.m., TA-3, Building 1616. For more information, call 672-0305.

### Friday, Aug. 16

- **Innovators' Forum:** "Who Says Marketing Isn't Rocket Science?" Webb Sherrill, The Sherrill Co. Inc., 11:45 a.m., Otowi Cafeteria Side Dining Room A.
- **Environmental Science Seminar Series:** "Risk and the Meaning of Life in Environmental Restoration," Resha Putzrath, a consultant on health science and risk to the Department of Energy and the Environmental Protection Agency, 2 p.m., Physics Building Auditorium.

### The weeks ahead

- **Los Alamos Country and Western Dance Club** (a Laboratory-sanctioned organization) sponsors free country and western dances from 7 to 9 p.m. most Sundays at the Los Alamos Community Building. For more information, call 662-5722.

Retirement party for

**C. Max Fowler**  
of Hydrodynamic  
Applications (DX-3)

**3 to 5 p.m.**  
**Thursday**

Otowi Cafeteria  
Side Dining Rooms A and B

For more information, contact Alita Roach  
at 5-6277 or Mail Stop P915.

August is ...

### Property Awareness Month Computer Sanitization Week Monday through Friday

• Booths will be set up at the Otowi Building with demonstrations on sanitizing computers and how to access the Laboratory's Swap Shop. Brochures with instruction on how to sanitize your computer also will be available.

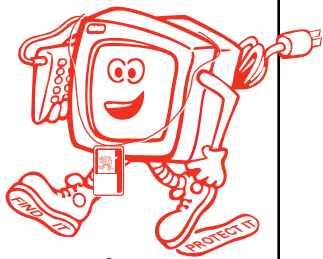
• An exhibit of the K-12 Program will be at the Otowi Building.

• An awareness campaign on good computer sanitization procedures will be presented Tuesday by Computer/Communications Security (FSS-14) to property administrators.

• Prizes will be awarded to individuals who can name their organizational computer security representative and property administrator.

**Prizes, training pamphlets and displays**

**Look for Scooter at the Otowi Building,  
Johnson Controls World Services Inc.,  
TA-16, TA-53, TA-55 and  
other places around the Laboratory.**



## Business Operations Division increases efficiency ...

*continued from Page 4*

"In fact, since implementation of the standards, we have increased the number of problems resolved over the phone by 35 percent. Additionally, we have seen our average resolution time decreased significantly, which suggests that our support staff are becoming more skilled as they concentrate on supporting a common set of products," Spontarelli added.

Perez said the division currently is in the process of changing its computer operating system from Windows 3.1 to Windows 95. In support of the switch to Windows 95, BUS is going to begin a pilot this month using a Microsoft product called Microsoft Systems Management Server.

The pilot, a collaboration among BUS, CIC and the IA Project, will give BUS the means by which to electronically distribute software, automatically inventory both software and hardware within the division, keep

track of software and hardware standard usage and more effectively gauge cost savings associated with the system changeover, among other things.

"Desktop standards have been a widely used industry strategy for meeting increased demands from customers and lowering the cost of doing business for years. We in BUS already have experienced a taste of these benefits and are expecting much more," said Perez.

A detailed list of the standards BUS uses can be found at <http://www.bus.lanl.gov:8001/bus/highlights/desktop/desktop.html> on the World Wide Web.

—Ternel Martinez

## Sandoval wins ...

*continued from Page 5*

Grande Textiles" for his Rio Grande rug. During the recent Spanish Market in Santa Fe, he received two more awards for his weavings. The first, called the Jake O. Trujillo Award for Excellence in Weaving, was given for his weaving titled "Cambiando Caminos" (Changing Roads), a saltillo-style weaving filled with all-natural black, gray and Brazilwood red dyes.

The second award, the William Field Design Award, normally is given for innovative design in santero (wood carving) art. This year, however, Sandoval received the award for another of his saltillo-style weavings titled "Bonita Flor" (Beautiful Flower). It is the first time the Field award has been given for a weaving.

## Citizens' Advisory Board Meeting

The next Citizens' Advisory Board meeting is scheduled from 6:30 to 9:30 p.m. Tuesday at Coronado Hall, 120 Civic Plaza Drive, Taos. Anyone wishing to make comments at the meeting should contact the CAB before the meeting. Written statements may be filed with the board either before or after the meeting. Call Ann Dubois at 1-800-753-8970 for more information.

